



Shuttle on review—page 2; Deep gloom—page 3; Sterling performances—pages 4, 5

Shuttle on review as choice narrows for space transport system

Grumman/Boeing Space Shuttle team leaders went to Houston December 2 to present to the National Aeronautics and Space Administration their recommendations for the Space Shuttle version to be pursued in the next six months. It was the critical "Mid-Term Review," and it represented the essence of five months of very intensive work by Grumman/Boeing and their seven associates under a \$4 million NASA contract.

The study until now concentrated on three major concepts and a variety of configurations in an effort to arrive at the most economical space transportation system possible.

Short shots

If you have a hankering to be serenaded this holiday season you've got a treat in store. The Grumman Employees Band is going to visit various plant cafeterias and assembly floors to play a selection of lunch-hour music consisting of traditional holiday, popular, military, jazz, and rock. Wow, what a mixed bag!

The band, under the direction of Al Kordula of Supply Operations, will open up their "concert" tour today, Friday, December 11, at Plant 12, and will play during both lunch periods. Other stops include Plant 2, December 14; Plant 3, December 15; Plant 5, December 16; Plant 1, December 17; Plant 6, December 18.

When Lt. Cdr. Jay Rower and B/N Lt. Cdr. Wayne Robinson landed their Grumman A-6A aboard the carrier Independence during operations in the Mediterranean recently they had to display their cake-cutting skill as well. It just so happened that the A-6 crew had just completed the 137,000th landing by Air Wing 7, so tradition called for the Independence skipper, Capt. G. G. O'Rourke, and fellow members of VA-65 to share a cake with Rower and Robinson to celebrate the occasion.

Don Diebel appointed Resident Laboratory Manager of Plant 31. . . Scouts of Troop 194 in Babylon honored Dan Zawyrucha of Inspection, Plant 24, recently with a plaque inscribed "in deep appreciation of services rendered to B.S.A. Troop 194." Zawyrucha has been in scouting for 15 years, the last three as the troop's first advancement committee chairman. . . On Monday, December 28, at 7 p.m., President Lew Evans will be guest of former Nassau County Executive Eugene Nickerson on Long Island's TV Channel 21.

About the cover . . .

Precision. That's the essence of this striking photograph by Carl Lassig, who heads the Photo Lab in Plant 5. Lassig snapped Inspector Del Nicewarner while he was lining up a vernier gauge that he was using to get a precise measurement on an F-14 titanium landing-gear bulkhead at Plant 58 in Sterling, Va.

Precision machining and the people who accomplish it make up the story at Plant 58.

For more on Sterling, see pages 4, 5.

Accompanying Shuttle Team Director Larry Mead and his Shuttle experts to Houston were President Lew Evans and Senior Vice Presidents Joe Gavin and Grant Hedrick.

Two recommendations

Grumman/Boeing made two recommendations to NASA. The first was a fully reusable booster the size of a 707, riding piggy-back into orbit on a fully reusable booster the size of a 747. Grumman termed this combination "best" in the long run in these respects:

- Greatest assurance of lowest cost per flight
- Expansion and attraction of space traffic (most versatile)
- Least operational restrictions (wider choice of launch site)

The alternate recommendation from Grumman/Boeing to NASA suggested use of a reusable orbiter (identical to the one used in the piggy-back version) on an available Saturn 1C Boeing booster, to be used for early flight until a more advanced booster could be developed under a "non-crash" program. The practicality of this, Grumman pointed out, is that costs could be apportioned over a longer period in the event of a continued Federal budget squeeze.

Deeper studies

It is clear, said Fred Raymes, assistant Shuttle Program director, that NASA is concentrating on developing the fully reusable orbiter-booster. "We are going to be emphasizing this approach in our follow-on studies," he said, "and we are requesting additional funds to go into deeper, more detailed design studies for the remainder of our present contract, which runs until next July."

The next phase of the Space Shuttle Program, according to the NASA schedule, will be a Request for Proposal in July of 1971 for design definition. The hardware contracts, for the orbiter and the booster, will follow. As Raymes said last week, "The competition for this one 'piece of space business' is going to be tough as hell, with McDonnell Douglas and North American Rockwell, our two competitors, breathing down our necks."

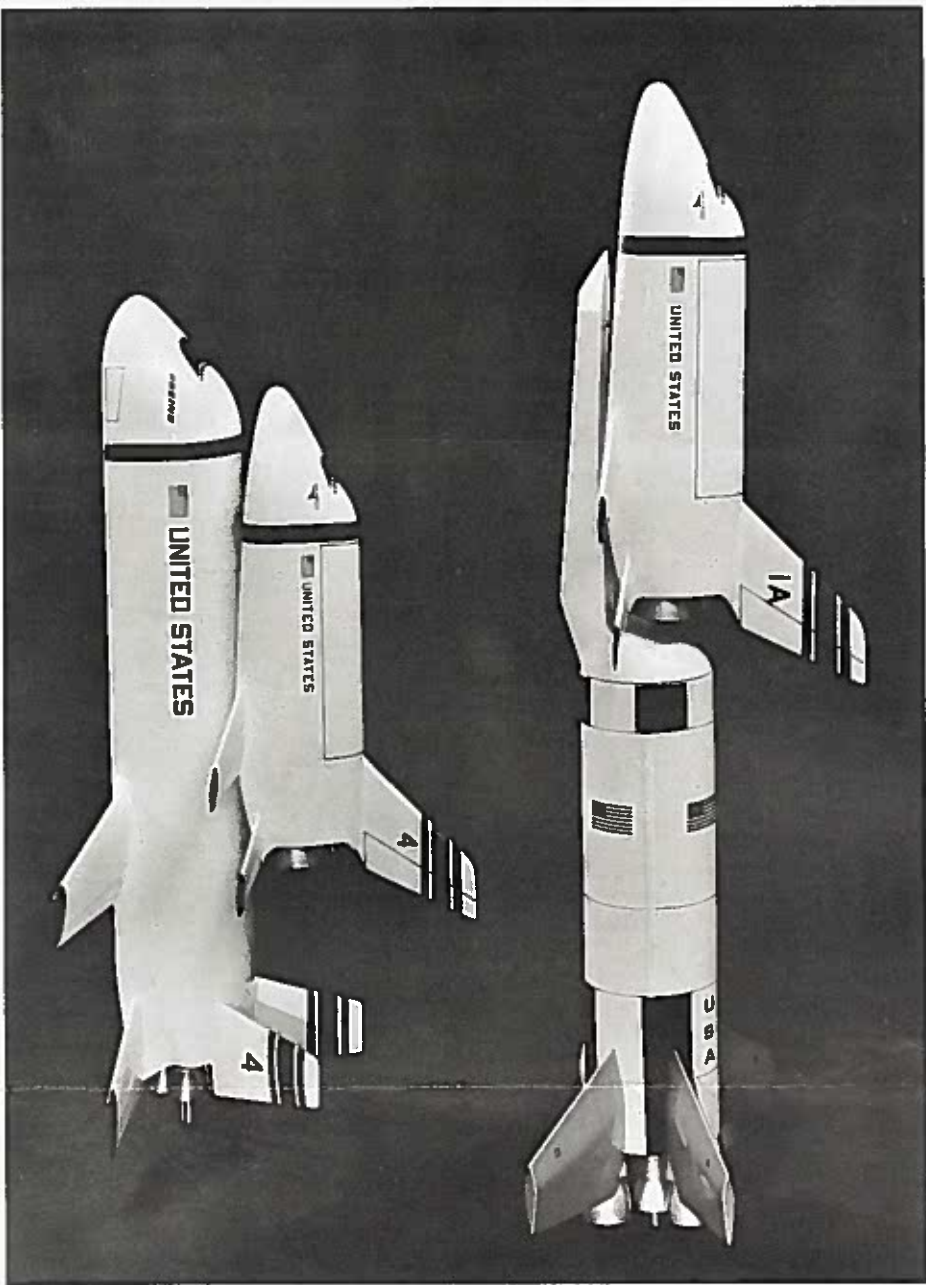
Much work has gone into the Grumman/Boeing team's Alternate Space Shuttle Concepts Study, which continues until next July. The engineers presenting their conclusions in Houston included Raymes; Max Braun, Ralph Nansen, and Jim Fuller of Boeing; Bob Watson, Gray Smith, and Erick Stern of Grumman.

The other companies working on the Shuttle with Grumman and Boeing are Aerojet General, Avco Corporation, Avions Marcel Dassault of France, Dornier Systems of West Germany, Eastern Airlines, General Electric, and Northrop.

Publication note

The Christmas schedule at Grumman calls for distribution of bonus checks and turkeys the morning of December 24 and holidays for celebration of December 25 and January 1.

Plane News will publish a special Christmas issue on Tuesday, December 22, and then will not be distributed again until January 15.



Design narrows. Mid-Term Review of Space Shuttle had NASA choosing Grumman's piggy-back fully reusable orbiter-booster (L) as one to pursue in next six months. Economy version (R) suggests same orbiter on S-1C booster. (Photo by Jim Wagner)

CALENDAR of events

Notice of events for period of Dec. 22 - Jan. 15 should reach Plane News by Wed., Dec. 16.

Amateur Radio Club: Wed., Dec. 16, 5 p.m., at the WA2LQO shack on the roof of Plt. 5, bus. & oper. mtg. Emmett Goodman, Ext. 87125.

Chess Club: Tuesdays, 5 p.m., Plt. 3 Cafe, tournament, games. Alex Ikonnikow, Ext. 7592.

Coin Club: Wednesdays, 12:05-12:50, Plt. 25 Vendor Conf. Rms. Ken Hale, Ext. 1936.

Dog Club: Mon., Jan. 11, 8:30 p.m., Plt. 28, gen. mtg., no canines. Dan Winn, Ext. 3175.

Duplicate Bridge Club: Thursdays, 5:45 p.m., Plt. 3 Cafe, reserv. not req., partnerships arranged. Pete Harrington, Ext. 1812.

Environmental Tech. Seminar: Wed., Dec. 16, 5 p.m., Plt. 35 Conf. Rm. 1A & 1B, gen. session of ETS, spkr. Anthony Taormina, principal Fish & Wildlife biologist on "Aspects of L.I. Surface Water Conservation". Ext. 2225.

Ex-Servicemen's Club: First Mon. of month, 7:30 p.m., Plt. 28 audit., exec. & gen. mtg. Pete Volpe, Ext. 84754.

Fencing Club: Fri., 5 p.m., Plt. 30 Cafe., competitive fenc. & instr. Joe Campisi, Ext. 1134.

Horseback Rid. Club: Every Sun., 11 a.m., By-Ways Stables, Huntington, Eng. rid. lessons avail., Donna, Ext. 86214, club meets 1st Thurs. of

month, Plt. 28, 5:30 p.m. Caren Carlson, Ext. 2725.

Huntington Toastmasters Club: Mon., Dec. 14, 8 p.m., Allstate Bldg., 1st fl. conf. rm., international, educational meet. T. Campbell, Ext. 3157.

Leather Craft Club: First & third Wed. of month, 5-6:30 p.m., Plt. 28 audit., instruct. in leathercraft & new ideas & techniques. Cy Dotz, Ext. 86828.

Retiree Club: Wed., Dec. 16, 12:30 p.m., Holiday Manor, buffet, inst. of ofc.s., entertainment, dr. prizes. GAA, Ext. 2133.

Ski Club: Wed., Dec. 23, 8:30 p.m., Holiday Manor, Bethpage. Bill Flynn, Ext. 1823.

Soccer Club: Sun., Dec. 13, 12:30 p.m., Reserve team vs Forest Park, GAC, Plt. 3, 2:30 p.m., Premier team vs Merrick, Grumman Plt. 3 field; Sun., Dec. 20, 12:30 p.m. Reserve team vs Huntington, Huntington, Premier team vs Jamaica, Jamaica, 2:30 p.m., league & cup games. Karl Herrkind, Ext. 85141.

Stamp Club: (Bethpage) First 3 Wed. of month, 5 p.m., Plt. 30 Cafe, swapping, circuit bk. sales, auctions. Marly Harow, Ext. 9172.

Wgt. Watchers: Every Tues., 4-4:45 p.m., Plt. 28 audit, spkr., Mimi Ackerman, W.W. lecturer. Lee Badalamenti, Ext. 2171.

GRUMMAN, December 11, 1970



ASW standouts. Senior Vice President Bill Zarkowsky offers congratulations to Cdr. Jim Elster, skipper of VS-32, during presentation of Jimmy Thach Award for top sub-hunter squadron. VS-32, based at Newport, R. I., was chosen by the Navy to receive the Grumman award for outstanding ASW squadron.

Getting together

Five members of Grumman's Cooperative Education Program stood at center stage a few days ago as Vice President Tom Rozzi, director of Security and Personnel Services, did the honors, backed up by Art Gilmore, director of Training and Development.

It was a sort of "pre-graduation" ceremony for four of the co-op students: Elliot Kaplan, Daniel Katz, Stuart Kratky, and Jeffrey Kubrick, all of whom attend Northeastern University and will graduate this coming June. The fifth co-op student, Clarence Mayo of Howard University, is to graduate in '72.

On the average a co-op student works full-time at Grumman for 20 months during the five-year program.

Twenty students were on hand for the meeting. It was the sixth of the general meetings, which concentrate on the interchange of ideas among the students who've been working at Grumman and Company officials.



Warm exchange. Vice President Tom Rozzi joins in banter with students in Grumman's co-op work-study program. (Photo by Fred Annette)

Evans praises workers on LM on completion of final vehicle

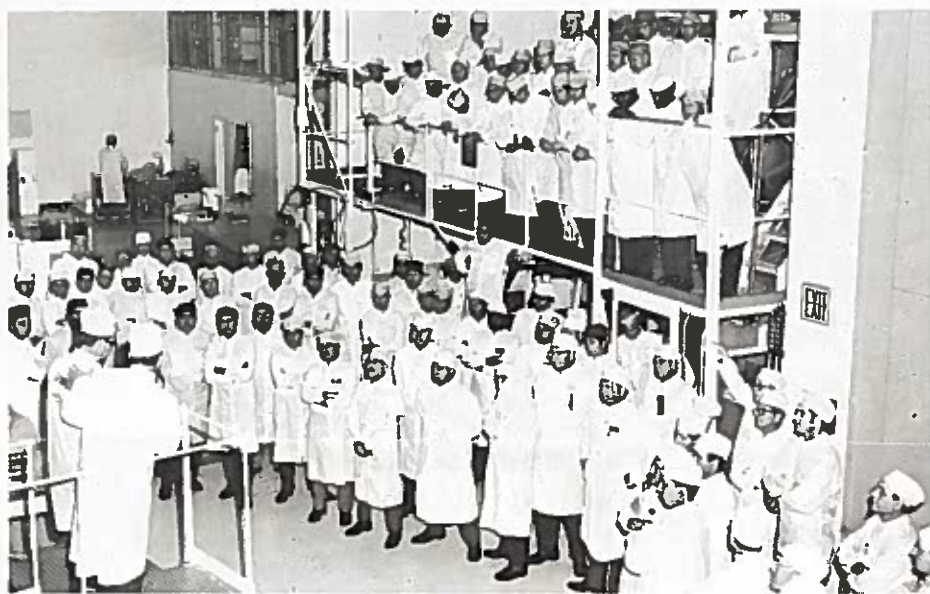
While reviewing progress on the Lunar Module Program here since 1962, and looking forward to the launch of LM-12 in the summer of 1972, President Lew Evans held a thank-you session for many who have contributed to the success of the LMs in the Apollo Program.

In LM Final Assembly, Plant 5, the afternoon of December 3, Evans and four Vice Presidents welcomed the production personnel gathered there "and many others who are not here," thanking them for the quality of "the machine that has kept Grumman No. 1 in the aerospace business." Evans noted that LM-12 now passes from the manufacturing to the test stage and will be delivered to Kennedy Space Center next June—thus closing out the Lunar Mod-

ule Program at Grumman.

Confidence was voiced for continued Grumman participation in the national space program, however. Evans said the Space Shuttle had had a good mid-term review in Houston the day before, and Senior Vice President Grant Hedrick was optimistic on future Shuttle work.

LM-8, long ago finished and shipped to Kennedy Space Center, will ride on the next moon mission, commanded by Alan Shepard. Apollo 14 is scheduled for launch from KSC on January 31, 1971. Ed Mitchell will be LM pilot and Stuart Roosa, Command Module pilot. Their landing site, Fra Mauro, will be the same one that had been selected for Apollo 13, the mission that had to be aborted last April when an explosion ripped a hole in the Service Module.



LM's their baby. President Lew Evans marked conclusion of LM production and start of LM-12 testing with rally of seasoned workers at Plant 5 LM Final Assembly. (Photo by Fred Annette)

Deep gloom envelops OAO camp as shroud malfunction ends shot

The gloom was miles thick, and still is, in the Orbiting Astronomical Observatory camp. OAO-B, the promising spacecraft that was to have taken a 38-inch telescope into orbit to gather ultraviolet radiation data for Goddard Space Flight Center, ran into trouble shortly after takeoff November 30 and plunged into the Indian Ocean off the east coast of Africa about half an hour after launch.

What happened? A NASA Review Board at Lewis Research Center is looking for the definitive answer, but "our spacecraft looked to be in good condition," points out OAO Program Manager Ted Moorman.

What seems to have happened was trouble in the separation of the shroud that protected the OAO during launch. As Moorman describes it:

"Launch appeared completely normal at Kennedy Space Center until shortly after the Centaur (second stage of Atlas-Centaur booster) began to burn. The booster got its signal to jettison the

nose shroud, but the shroud apparently failed to separate and the Centaur continued to carry the shroud with it. This made additional weight, and the Centaur, still carrying the spacecraft, couldn't reach orbit. In the separation sequence that followed, the spacecraft did free itself, but it was not in orbit. It continued 'over the top' (through perigee) and re-entered the atmosphere. Signals were in good shape at Bermuda and the Canary Islands, but there wasn't a peep at Madagascar."

In contrast to the disappointing turn of events, OAO-2 completed 10,520 orbits and two years of successful investigation of stars and galaxies on December 7 and is still "a fantastically successful spacecraft," according to Dr. Arthur D. Code of the Space Astronomy Laboratory, University of Wisconsin.

The next OAO, Spacecraft C, which will carry the Princeton and University College of London Experiment Packages, is at Goddard Space Flight Center in final stages of integration and checkout.



Shop talk. Manager John Otterstedt (L) stops by to chat with Charlie Lucas while checking progress of F-14 titanium wing beams being machined on this Cincinnati three-axis profiler. Chips swept from machine bed are later collected, baled, and sold for scrap. (All photos by Carl Lassig)

At Plant 58, they're combining talent and technology to aid F-14 effort

STERLING, VA.— At the Grumman machining facility here, just a few miles across the rolling countryside-side from Dulles International Airport near Washington, D. C., the more than 100 men and women at Plant 58 are looking forward expectantly to the first flight of the Navy's new fighter, the F-14.

And with good reason. Although there has been little publicity or fanfare concerning them, the people at Plant 58 have been a vital segment of the F-14 "sprint" team since Grumman first won the contract to build the Navy's new air-superiority fighter nearly two years ago.

John Otterstedt, who heads the Sterling facility, is a chunky veteran of 25 years of machining operations, the last five at Grumman. He sees the recent rebuilding program at Plant 58 as providing the Company with the technical muscle needed for space-age machining. In the last couple of years, Grumman has added about \$40 million worth of machining and related equipment to prepare for future contracts. A good portion of that machinery is located at Sterling.

Plant 58, a long rectangular structure containing about 100,000 square feet of floor space, stands on a little traveled highway in this tiny Virginia town.

Initiative spells success

A few people from Corporate headquarters in Bethpage accompanied Otterstedt to Plant 58, but the great majority of the people at Sterling are drawn from the region surrounding the plant, with some machinists commuting to the facility from towns up to 80 miles away. Otterstedt attributes much of the success at Sterling to the initiative of the people based here, and cites their on-the-job training program as proof positive of the accolade.

"About 60 percent of our people

we trained on the job—starting with deburring, and working right on up to machine helper and eventually machinist. With the assistance of the training program, we've built up a staff of precision machinists who turn out vital components for the EA-6B and the F-111 as well as the F-14.

"The majority of F-14 machined parts take shape right here at Plant 58," Otterstedt points out. "Since the F-14 is basically a machined-parts aircraft, we're well equipped to do the job. Nearly all of our machines are numerically controlled—that is, they can be programmed to perform machining operations on one, or as many as four, different parts simultaneously.

Wide capabilities

"Sterling may be difficult to find on a map," John says wryly, "but we do have some equipment here—a couple of three-spindle, five-axis Cincinnati skin mills that can perform a series of operations on five different planes—that's something you won't find in most of the biggest machining complexes in the country!"

Since much of the equipment at Sterling is capable of the "hard" cutting necessary for such materials as titanium, steels, and exotic metals, the facility is prepared not only for present-day machining needs, but for future contingencies as well.

After machining, parts are inspected by Quality Control personnel and weighed to make sure that they conform to rigid F-14 specifications, then are readied for transport to Bethpage.

Otterstedt admits that it took him and the people of Plant 58 many long hours of sweat and hard work to get the Sterling facility ready for the future, but now, they feel, they are ready.

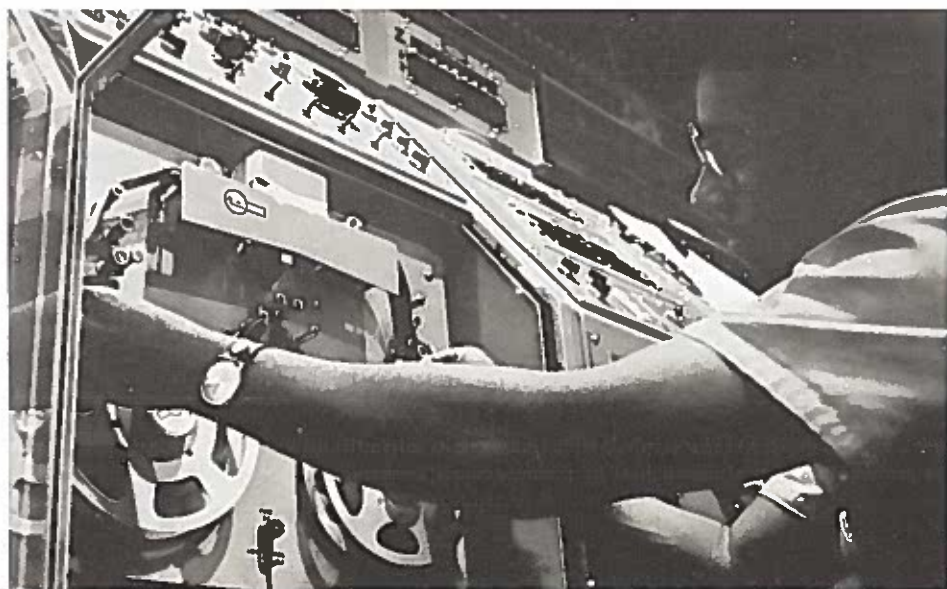


Clean up. Milt Holler uses air hose to clear metal chips away from titanium frame he is machining for F-14 landing-gear bulkhead. Day and night shifts at Sterling facility turn out precision parts for F-14, F-111, and EA-6B.



Teamwork. Leadman Jim Anderson (L) gives Gary Kaetzel instructions on cutter grinding, while at right, Glenn Barnhart sharpens a tool bit. In foreground are some of the cutters used in machining operations at the Sterling facility.

Make ready. John Chinn (L) prepares Cincinnati three-axis skin mill for operation by threading computer tape into numerical-control console adjoining his machine.



Calling high-average keglers for varsity pin tryouts

Well, gang, the days of reckoning are here! It's that time of the year again—time for the hottest bowlers in the Company to take a couple of steps forward to test their skill against the best in Grumman. And when it's over, the 30 remaining survivors will represent Grumman in three L. I. Industrial tournaments. Quite a challenge!

If you'd like to try and win a spot on one of three Company varsity bowling squads, fill out the application blank contained on this page and mail it to GAA, Plant 28B. Entries for the men's and Nite Owl teams should mail their registration forms to Herb Mahoney; women's applications should be sent to Rete Looney.

Averages for at least 24 games in sanctioned ABC or WIBC leagues are required of all contestants. The minimum entry average for men is 175, for women, 125, and for Nite Owls, 145. Averages should be combined if a bowl-

er competes in more than one league. The entry averages for men are to be computed through the week of December 14-20, with January 4-10 for the women. The averages for entrants in the Nite Owl trials are to be computed for the week of February 8-14.

The rollofs will follow the same format initiated in last year's competition, says Bob Benn, GAA head. Men's and women's trials will be held on Saturday nights at Mid Isle Lanes in Hempstead. The Nite Owls will also compete at Mid Isle but on Monday afternoons. All final standings in the rollofs will be computed by total pinfall.

Candidates for the men's tournament will be the first under fire at Mid Isle, with opening round action slated for January 16, and extending through February 13. The men wil roll six games a night for the first four rounds, and finish up their 27-game effort with a three-game session on the final night.

After the opening 12 games the field will be reduced to 32, and further cut to 20 after 18 games. Following the fourth round, the 10 survivors will battle on February 13 in the final three games for the five starting spots in the annual men's L.I. Industrial Tournament.

In women's competition, the girls will roll a total of 18 games in their tryouts, with four games scheduled for the first three sessions (starting January 23), after which the field will be sliced to 10, and three games in each of the last two rounds to determine the starting five in the women's L.I. Industrial tourney. The windup is slated for February 20.

The Nite Owls open their bid for berths on the industrial tourney team on Monday, March 1. This year the Owls will follow the same format as men's varsity—six games in each of the first four sessions, with three the final

session. The field will be cut to 30 after the second session, to 20 after the third session on March 15, and to the final 10 on March 22, with head-to-head competition in three games on March 29 to determine the opening lineup in the annual Nite Owl tournament.

Two special events are on tap for the men's and women's varsity squads. On February 27, Sperry will host the annual Jamboree involving full squads of all companies entered in the men's and women's tourneys in a one-night, three-game donnybrook. On April 3, the top two men and women from these same squads will compete in the Pan Am mixed tourney. Both tournaments will be held at Mid Isle Lanes in Hempstead.

Last year, both the men's and Nite Owl varsities were outgunned in their bids for tourney crowns, but the ladies won big to pack away the title in the women's tourney.

Plan big ski weekend, Jan. 29-31

There's a big ski weekend scheduled for January 29-31 at the Sheraton-Wayfarer Inn at Manchester, N.H., where there are trails and slopes for beginners and experts in such areas as Onset, Crotched Mountain, and Pat's Peak.

According to Bob Benn, director of GAA, the Sheraton-Wayfarer offers luxurious accommodations, including private bath, wall-to-wall carpeting, phone and color TV, and for a change of pace, ice-skating in a lighted reflect-ed pool.

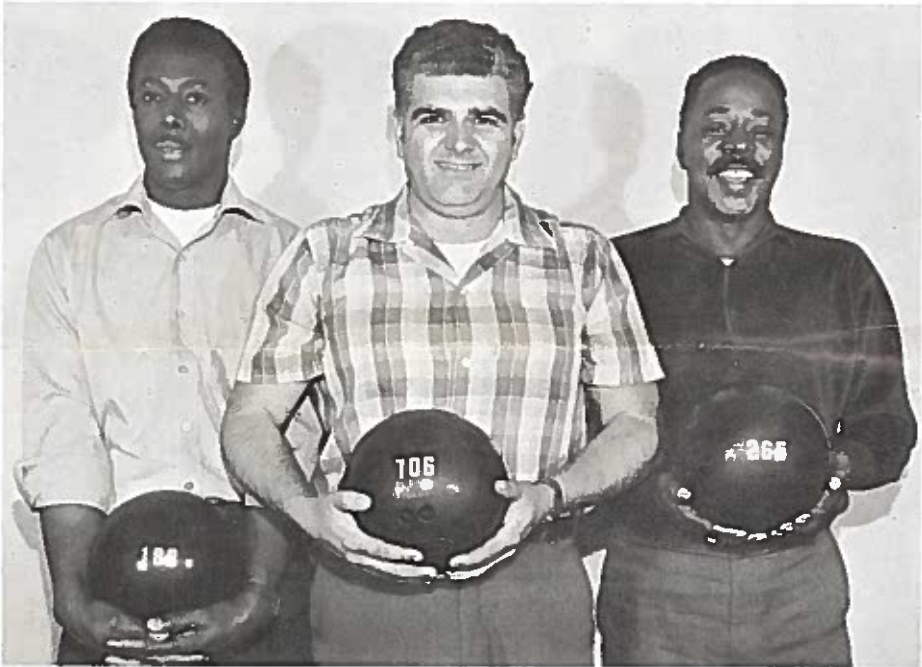
Among the other highlights of the GAA ski weekend, says Benn, are:

- Transportation via modern, reclining seat air-ride motor coaches
- Transportation to and from ski slopes
- Snacks and beverages on arrival
- Breakfast and dinner daily

- Ski instruction—minimum of two hours daily
- Get acquainted cocktail party
- Entertainment and dancing nightly
- All tips and taxes

And how much will it cost you? The price is \$49.75 each if you choose four-to-a-room accommodations, \$52.75 for three-per-room, and \$57.75 for doubles. Ski equipment supplied at the site will be buckle boots and step-in bindings. However, if you have your own equipment, subtract \$5 from the above prices.

Accommodations can be guaranteed only to the first 80 people signing up for the weekend, so better hurry. Call Chet Baumgartner at the GAA office, Ext. 2133. The bus will leave on Friday, January 29, at 5:30 p.m. from the north-west corner of the Plant 3 parking lot.



Big three. This trio has given Nite Owl keglers something to shoot at this season. Ralph Laurino (C) set game and series marks of 266-706, Ernie Jenkins (L) holds high average of 188 with Rudy Dunkley (R), and has second-high string of 657, while Dunkley, besides his high average, is runner-up to Laurino with 265 game. (Photo by Larry Van Wallendaell)

Varsity Bowling Trials

Entry Blank

Men's Varsity

Women's Varsity

Nite Owls

Name

Badge No.

Plant

Dept.

Ext.

Qualifying Averages

Men's (175)-Dec. 14-20, inclusive

Women's (125)-Jan. 4-10, inclusive

Nite Owls (145)-Feb 8-14, inclusive

Average

League & Lanes

No. Games

Submit to GAA, Plant 28B

Entry Deadlines

Men-Jan. 4

Women-Jan. 19

Nite Owls-Feb. 19

Newcomers run wild in hoop loop

The big question in the Garden may be whether the Knicks can repeat, but at Bethpage it's whether any team can knock off the high-scoring Newcomers in the Tuesday-Thursday hoop loop. Lee Gendron has put together a fast shooting crew, with Frank Quarto and Jim Cruthers two of the quickest fast-draw men.

Quarto dropped in 34 points to lead the Newcomers to a 107-63 win over the Dacs, while Cruthers collected 25 in a 112-71 victory over the Hustlers. Ronnie Bartlett's 24, Cruthers' 16, and Gendron's 16 aided in the demise of the Dacs, while Bob Scully netted 23 and Bartlett and Gary Pike each threw in 18 to help down the Hustlers. Bill Boyce was high man for the Dacs with 29 points, while Bill Foote and Walt Gleich each contributed 20 to the Hustlers.

The Hustlers found easier going against Propulsion. Gleich bombed the nets for 38 points and Bob Hambrecht added 23 as the Hustlers outgunned Propulsion, 91-74. For Propulsion, Vince Clerico had 23 and Larry Hill finished with 22.

Gad zooks! Research found the winning combination a few weeks back against the Supporters—after a couple of years trying—and apparently they don't want to let go of the formula. This time the Druids felt the harsh reality of a resurging Research squad when John Brook hit for 23 points and Garnett Busch added 19 in a 106-46 Research triumph. And just for good measure, Research soared over the "100" mark to chalk up the most points it has ever recorded. Look out, Newcomers!

Ride Wanted

BENSONHURST: Bklyn., W. 8 St. & Bay Pkwy., 8-4:30 p.m. 212 236-8834.
HUNTINGTON STA.: Maplewood Rd. & Melville Rd. to Pit. 30, 8:30-5. 271-4486, after 6.

Riders Wanted

ISLIP: Bay Shore to Bethpage plts., 7-4 p.m. HU 1-3826.

Wanted

CHORD ORGAN: AN 9-4890.
SHOP MANUAL: For '59 Studebaker. W. Roder, Ext. 87504.
GAS TANK: 6 gal. for '68 Johnson outbd. 799-5945, after 5.
LOUDSPKR.: Western Elec. 728B, 12 in. dia. FR 9-5914.
POST: Unit w/wo gears for '68 GTO or clutch for same; stock Chevy intake manifold for '68-'69; 396/325 Chevy rat motor w/wo carb. 667-3893.
HANDY MAN: For various home improve. jobs. HN 6-9574.
BOAT TRLR.: For 18 ft. boat. FL 4-2547, after 6.
APT.: 3½ rm., Suffolk, Huntington, Melville, Babylon area, yg. bus. cpl., Feb. occup. MI 3-9646, after 5:30.

For Rent

ROOM: Hicksville, pvt. ent., gent., \$20/wk. OV 1-7486.
ROOM: Hicksville, furn., pvt. ent., gent. only, \$25. 931-2044.

For Sale

PONTIAC: '64 Tempest, 2-dr., 6 cyl., auto., pwr. steer., ask. \$495. MY 2-5928.
CHEVROLET: '70, V-8, 307 c.i., auto., 2-dr. Malibu, vinyl tp., R&H, w/w, take o'pmts., approx., \$2,600. 587-1821.
OLDSMOBILE: '68, 442, pwr. steer. & bks., & ariel, fact. mags, new wide oval, auto., astro seats, hdstest, blue w/wh. vinyl roof, \$2,000. 234-1053.
FIAT: '67, 1100R, 4-dr. sed., \$475. 543-7828.
MISC.: VW, '63 panel truck, \$400; juke box. Comet fire ball, 120 select., \$75; Whirlpool clothes dryer, \$25. OR 6-7468.
TRLR.: 5x7 w/2 ft. sides & tail gate, over 2,000 cap., \$100. CH 9-5914.
TRAVEL TRLR.: '66 Elcona, 17 ft., slps. 6, refrig., stove, heat., shower, bathrm., hot water heat., gas & elec. lgts., xtra water tank, ask. \$2,000. 473-6471.
BOAT: 23 ft. Penbroke, low eng. hrs., ice box, stove, hd., slps. 2, xtras, reason. offer. PO 7-5034.
BOAT: '67 Glasspar, 17 ft. Seafarer sedan, Navy tp., hd., slps. 2, '67, 60 hp Johnson, xtras, \$2,000. TN 8-9828.
BOAT: 17 ft. Penn Yan, 70 hp Evinrude outbd., trlr., full canv., xtras, \$1,300. AN 1-5597, after 6.
CESSNA: 1/3 share in Skymaster 336 Twin, IFR equip., dual 360 CH transceivers, dual VOR, GS, XPNAR, ADF, autopilot, EGT, seats 6, xtras, HA 1-4543.
FURN.: Simmons conv. sofa w/rose nylon uphol., \$35; early Amer. maple hi-chr., \$10; studio couch, \$10; Cosco card tbl., \$10. 928-1711.

Image makers

How's your image lately? No, no, not that image. You can take care of that one with good public relations, hopefully. No, we mean the real you. The image that people see every day!
If it's not quite as sleek as you'd like it to be, we've got a message for you. Six weeks ago, a Weight Watchers Club was formed at Grumman. Since that time, the total weight of members attending these sessions dropped over 500 pounds—with one smart aleck shedding 27 pounds to lead the parade.
You want to lose weight, you say? Okay. Call Lee Badalamenti on Ext. 2171. And if you have to get a whole new wardrobe, don't blame us.

GRUMMAN, December 11, 1970

For Sale

HOUSE: E. Hampton, summer or yr. round, Clear-water Bch., cedar shingle ranch, hvy. wood. ½ acre, 2 bdrm., tile bath, lrg. liv. rm. w/beam. ceil. & firepl., din. rm., 1½ car. gar., full bsmt., lrg. patio, nr. pvt. bch. & boat dock, \$29,900. 724-6140.
HOUSE: Commack, 3 bdrm. ranch, cent. air cond., fin. bsmt., w-w, Indscpd., 1/3 acre, fenc. & treed, underground sprinkler sys., conv. located, xtras, \$30,000. FO 8-5177.
HOUSE: E. Northport, 4 bdrm. ranch, 16x16 kit., 1½ bath, 14x18 liv. rm., cath. ceil., firepl., w-w, lrg. din. rm., 110x100 plot, wash., dry., low taxes, ask. \$24,900. AN 1-4488.
HOUSE: Woodbury, 4 bdrm. ranch, den w/firepl., 2½ bath, mud rm., lrg. eat-in-kit., 2½ car gar., 20x40 sunk. pool, terraces & patio, ½ wood. acre, 5½% mtge. avail., \$72,000. 692-5393.
HOUSE: Huntington/Greenlawn, N., cust. 7 rm. ranch, 3 bdrm., 2 bath, den, fin. bsmt., 2 car gar., firepl., treed, Indscpd., 1/3 acre, nr. shops & RR, \$45,000. AN 1-3642.
PROPERTY: S. Jamesport, 114x140 corner, deed. pvt. bch, rts., reason. AN 5-8607.
BED: Queen sz. orthopedic matt., match. box spr., metal frame& casters, ask. \$150. 212 592-9508, after 6.
TWIN BD.: Williams col., cannonball sol. pine w/ Englander box spr., 1 yr., \$100. 757-8496.

at your SERVICE

This is a free service to Grumman personnel for non-commercial advertisements, accepted on a first-come, first-served basis. Classified advertisements are carried in PLANE NEWS only on the basis that everyone replying to such advertising will receive fair and equal consideration regardless of their race, creed, color, or national origin.
Type or print ad on form available at Employee Services and Engineering counters, and send via interplant mail to PLANE NEWS, Plant 5, Bethpage. List home phone (with area code if outside Nassau or Suffolk). Limit: one ad per person per issue. No item under \$10, no firearms or ammunition.

PLYMOUTH: '61, 2-dr. sed., auto., 6 cyl., R&H, \$100. 796-7687, 4-6 p.m.
WHLs.: 4 Renault Dauphine w/mtd. tires, \$20. MO 5-1139.
OPEL GT: '69 metallic grn., 1 owner, \$2,000. 334-3715.
AUTO PARTS: Hurst compet., & 4-spd. shifter w/wo linkage for Chevy w/Muncie, can be mod. for GM w/Muncie, \$35. 667-3893.
RIMS: 2 Keystone cust. Klassic 7x15; 2 chrome reverse 7x15, fits Ford or Ply., \$80 all, will sell sep. 212 LA 7-6245.
TIRES: 2 Goodyear Suburbanite w/w snows w/whls., 775x14, fits most GMs, \$30. CH 9-2368.
BICYCLES: 2, 26 in. boy's & girl's, German, lgt. wgt., \$15/ea. 212 ST 4-0164.
BICYCLE: Sears Spyder chrome, 3-spd. w/basket, \$35. HA 7-3979.
ICE SKATES: Girl's sz. 1, wh. Riedell boot, used 1 sea., \$12. AN 6-4549.
SKI BOOTS: Henke 5-bkle. man's sz. 10, \$20. 626-0835.
SKI BOOTS: Nordica sz. 8 & 5½, dbl. boot, lace type, \$15/ea. JU 1-7780.
MISC.: Kastinger ski boots, 10½ w/tree, \$30; alum. ski poles, 51 in., \$12; 7 ft. wood. skis; Edison cyl. records in orig. contain.; Duo Thermo sun gl. rm. heat. 223-8850.
SKIS: 4 ft. 11 in., child. laminated w/metal edge, Kandahar bind. w/sz. 2 ski boot, 40 in. poles, \$12. 226-3740, after 6.
MISC.: Henke ski boots, sz. 6, \$15; Starret micrometers, 0 to 1 in., & 2 to 3 in., \$15/ea. 567-0046.
ICE SKATES: Figure, sz. 4, never used, girl's, \$10. 731-0210.
CARR.: Bilt-rite coachette, reason. 212 479-0508.
CARR.: Tan coach, \$10. 473-7787.
CRIB: 27x50, varn. wood w/matt. 212 651-3605.
SPINET: Baldwin Orga-sonic, wal. contemp., percussion ensem., self-contain. ampl. 643-8493.
BOOKS: 24 begin. readers & 11 other child. bks., \$18. IV 6-5192.

For Sale

MISC.: 15 cu. ft. chest freezer on whls., \$80; kit. cab. w/formica tp., s-s sink & faucet, \$75; 16 in. bike w/banana seat & hi-riser hand. bar, \$10. 822-2239.
MISC.: 2 step end tbls. & match coffee tbl. w/wal. formica tps., 2 yrs., \$50 or best offer; stroller, 3 mo., \$15; floor lamp. 744-6354.
MISC.: Knotty pine gun cab. w/gl. drs., lgtd., \$110; car alternator, new, 12v, 35A, \$35; roto-broil Capri 400, \$35; Sunbeam mixmaster w/juicer, \$22; Teflon lined elec. cooker, \$15; elec. roaster, \$15. 757-2141.
GAR. DR.: 7x8 ft. alum., \$25. 273-7594, after 5.
PIANO: 4½ ft. baby grand, w/bench, Hartmann & Peck, \$400. 212 531-5005.
SLOOP: 26 ft. Pearson Cmdr., 3 sails, 6 hp outbd., aux pwr., slps. 4, xtras, ideal fam. boat, \$5,950. 261-1186.
CADILLAC: '67 Coupe De Ville, blue w/blk. vinyl tp., lea. int., all pwr., climate cont., 41,000 mi., \$2,400. 698-2499.
CHEVELLE: '68, 2-dr. Malibu, pwr. glide, blk. vinyl tp., pushbtn. radio, rear spkr. & antenna, posi. rear defrost., new w/w & rear bumper guards, \$1,750. SU 5-1038.
AUSTIN HEALY: '60, full race eng., 72 spoke whls, Pirelli radials incl. snows, many new bdy. parts, tonn. cov., \$750. 757-7567, after 5.

THUNDERBIRD: '62, blk., blk. vinyl tp., red int., 2-dr., bkt. seats, air cond., radio, pwr. steer. & bks., 57,000 mi., elec. oper. wind., new tires, muff., start. & batt. PI 6-7108.
PLYMOUTH: '66, 2-dr. hdtp., auto., pwr. steer., R&H, tint. windshld., new bks., batt. & fbgl. wide oval tires, ask. \$1,050. Artie Schwenker, Ext. 9406.
MISC.: '63 Lincoln Cont. conv., new tires, tp., 48,000 orig. mi., \$400; '67 Karmann Ghia, orig. owner, \$1,100. 212 793-1904.
VAN: '60 International, \$150. 725-2407, after 5.
CHRYSLER: '67 New Yorker, auto., pwr. steer. & bks., air cond., new tires. IV 9-0680, after 6.
DODGE: '64 Dart conv., red w/blk. tp., 6 cyl., 145 hp, R&H, w/w, 2 new tires, \$275. 842-0568.
TIRE CHAINS: 7.00/7.25x13, 6.50x14, 6.00/5.90x15, ask. \$10. 757-3271.
MOTORCYCLE: '70 Ducati, 450cc, 5-spd. trans., over-hd. cams, 750 mi., \$725. 587-9387.
MINI BIKE: Stella, 3½ hp, 35 mph, no fenders, \$110. MO 9-3983.
WHLs.: 2 VW, 6 hole bolt patt., \$10. Peter Gauthier, Ext. 7341.
HOUSE: Amityville, 4 bdrm. cedar Cape, fin. playrm., ful bsmt., low taxes, dead end st., \$22,000. MY 1-5948.
MISC.: Hot water tank, 30 gal., xtra hvy. dty., galvan., 250 lb. test, 106¼ lb. W.P., \$15; 14 in. Ford rims, \$10/pr; Rambler Amer. rims, \$10/pr. MY 1-5948.
PUPPIES: Eng. springer spaniels, AKC, Christmas deliv. 472-1806.
PUPPIES: Mini Schnauzers, AKC, shots, male, fem. JU 1-4748, after 6.
PUPPIES: Ger. shep., AKC, whelp, 10/20, blk., silver, & tan, shots, wormed, champ lines, \$100. 588-3194.
FISH TANKS: 3 - 10 gal. 1 - 5 gal., 1 std., fluor. lgts., filt., cov., sil. giant pump, all access. to oper. & main., \$55 all, will sel sep. AN 1-5936.

CAMERA: Polaroid mod. 800, lea. case, wink lite, bounce lite, filt., release cable, print copier #240, \$35. WA 1-4243, after 5.

For Sale

FISH TANK: 20 ga. & equip. LT 9-2701, after 3.
CAMERA: And slide projector, 35mm SLR Miranda FV Airequip 430 proj. & 8mm roll camera & Revere 85 proj., make offer. MY 1-2906.
PANASONIC: 8 trk. stereo tape deck, record., 2 spkrs., wal. cab., \$105. 433-5380.
AMPLIFIER: Marantz solid state stereo pwr., mod. 15, 120w RMS, 2½ yrs., cab., \$200. G. Harrington, Ext. 3652.
HI-FI: Grundig Majestic cons. w/stereo, mono, short wave & FM, \$50. 731-0210.
ACCORDION: LaTosca 120 bass, 15½ in. keybd. w/case, \$100. 742-0746, after 3.
ACCORDION: \$60. 271-8583.
HAM RADIO: Heath DX-10B transmitter & HR-10B receiver, 5 bands, 80-10M, code key, 20 crystals, \$120. SU 5-2688.
ENCYCLO. BRIT.: '59, comp. set w/bkcase, best offer. JU 1-0942, after 5.
CLARINET: W/case, \$80. MO 5-1139.
CLOCK: Grandfather, brass dial & wgtls., bevel. glass front, \$295; antique sch. house clock w/strike, \$135. HR 3-3232.
CADILLAC: '63, 2-dr. coupe, pwr. steer. & bks., new transmission, AM/FM, \$700. 731-2035.
MUSTANG: '67, air cond., new disc. bks., pwr. steer., auto. w/cons., low mi., \$1,500. WA 1-0029, after 6.
VW: '68 Bug, 43,000 mi., \$1,100. 289-4863.
TIRES: 2 Goodyear Suburbanite snows, 775x15, less than 600 mi., \$40/pr. 785-5331, after 6.
MISC.: '68 whl. camper, slps. 9, full elec., \$1,100; fish tanks & std., fully equip.; 1 - 55 gal. Crown, 3 - 10 gal., xtras, \$260. AN 5-8572.
HOUSE: Setauket, 3 bdrm. ranch, air cond., panel. den w/firepl., brick patio & redwood pool, prof. Indscpd., o.h.w., cut. cab in kit., 6 appli., 3 Village Sch. dist., xtras, \$29,900. 751-5791.
HOUSE: Oyster Bay, 3 bdrm. brick split, fam. rm., 2½ bath, 2 car gar. w/auto. drs., full tiled bsmt., alum s-s, o.h.w. 2 zone, blt-in fire alarm, attic fan, 4¼% mtge., \$49,000. WA 2-3860.
TV: 21 in. B&W Motorola w/std., \$35. 928-1711.
MISC.: Concertone tape deck, 2-spd., 3-motors, sol. state, 6 hds., auto., reverse, sound on sound, hi-spd. rewind, 10 new Ampex tapes, & pre-record, tapes, \$300. 922-4378, after 6.
HD. SKIS: Std. 185cm w/Solomon bind., \$85. WA 1-0029.
MISC.: Gibson elec. guitar, Scott amp., two 12-in. spkrs., 80w, \$150. LT 9-3615, after 6.
MAN'S RING: Star sapphire, 2 dia. chips, \$95. 939-9358.

OBITUARIES

Plane News has received word that death has come to the Grumman personnel listed below. We extend sincere sympathy to relatives and friends.

CURTICE BENISTON of Tanks & Ducts, Plant 2, died November 25 at the age of 49. He had been with Grumman for 22 years. His home was at 29 Wansor Ave., Bayville.

CARL F. KOELSCH died November 25 at the age of 52. He worked in Advanced Processes, Plant 12, and had been with the Company eight years. He lived at 19 Tremont St., Garden City.

RICHARD H. WIEBOLD of Machine Operations - Technical Service, Plant 3, died December 1. He was 57 years old and had been with Grumman two years. He lived at 64 S. Clinton Ave., Bay Shore.

JOSEPH VLADYKA died December 2 at the age of 54. He lived at 3635 Princeton Dr., N. Wantagh and worked in Production Control - Parts Control, Plant 3. He had been with the Company seven years.

(In the last issue of Plane News, the name of Pasquale DeVivo of Plant 55, Savannah, was misspelled. We regret the error.)

Time running out — United Fund needs YOU!

Would you panic if, in the middle of the night, your child had a convulsion? If your mother had a stroke tomorrow? If your teen-ager began to show symptoms of drug addiction?

You probably couldn't cope by yourself. What would you do?

Maybe these things won't happen to you, but you can't be positive. And they'll happen to someone you know. They're chronic threats.

Fortunately, Long Islanders have been sufficiently concerned in the past to subsidize hospitals and agencies that could help you, day or night. You, too, if you are a typical Grummanite, have helped.

This year the needs of the Long Island United Fund are pressing. The goal being sought from you and your neighbors is \$3 million in the year ahead for aiding 19 voluntary hospitals and 62 community service agencies. With the population of Nassau and Suffolk counties at 2½ million now, a wide spectrum of service is needed to take care of those in trouble.

You can help

Your dollars will help. The easiest way to contribute is through the payroll savings plan. No bookkeeping. You just sign up, and the amount is taken out of your pay. If you sign for a "full share," you will get a chance at one of 16 very valuable gifts (a color TV, for example, or a range, or a refrigerator-freezer) when the Grumman drawing is held at the end of the drive. If you sign up for any lesser amount, you still get a chance at eight substantial prizes.

Now let's think about how much you might want to give (remembering that your one gift helps not just a single organization, but 81). Any amount is welcome.

You can be the judge. If you can't see your way clear to pledging the so-called "fair share," how about \$25? Or \$50? That money could go toward help-

ing rehabilitate a retarded child, handicapped adult, a deaf youngster, a cardiac patient.

You have received a card inviting you to enroll through payroll deduction. Or you may send a lump sum to your Employee Services Office, or hand it to your ESO representative. A window sticker will be provided to show that you're participating.

When you sign up, you'll also get a ticket stub, and if the matching stub is drawn from the big white revolving drum, you may be in for a dandy prize. Here is the list (with some extras, to give you a choice):

1. Magnavox 25-inch stereo color TV combination with one year service
2. G.E. 24-cubic-foot refrigerator with ice maker and ice crusher
3. Sylvania 25-inch color console TV with one year service
4. G.E. Americana range or Caloric gas range
5. G.E. 25-inch color console TV with one year service
6. RCA 23-inch color console TV with one year service
7. Westinghouse side-by-side refrigerator-freezer
8. Sylvania stereo console AM/FM
9. Magnavox 19-inch wood color TV with matching stand
10. Sylvania 18-inch portable color TV
11. Frigidaire Skinny-Mini combination washer-dryer
12. Sony AM/FM stereo component system
13. G.E. 18-cubic-foot frost-free refrigerator
14. Caloric gas range
15. G.E. 16-pound automatic washer
16. Magnavox stereo component system, AM/FM stereo amplifier, record changer, speakers



Clinics for kids. The United Fund of Long Island helps sustain many special services for the handicapped, young and old. Here at Long Island Jewish Hospital a young man gets help in a speech and hearing clinic. (Photo by Nat Scherer)

17. G.E. undercounter dishwasher
18. G.E. upright freezer
19. G.E. stereo component system
20. Whirlpool automatic washer
21. G.E. electric 30-inch range
22. G.E. Port-a-color TV
23. Polaroid camera outfit #360
24. G.E. 23-inch black & white console TV
25. G.E. 23-inch black & white table model TV on stand
26. Westinghouse automatic clothes dryer
27. G.E. portable dishwasher
28. 16-inch portable black & white TV with stand

Engineering, Product Support drives underway

There's a yearly Engineering Christmas Fund that goes to the rescue of families that are in financial straits. Last year the contributions from interested engineers amounted to almost \$6,500 and helped 72 families, including 279 children.

This year Ardith Tepedino and Dolores Voss of Plant 5 are heading the effort, the other members of the Christmas Fund Committee being Don Bennett, Muriel Leighton, Judy Yoos—all of Plant 5; Lillie DuBois of Plant 15, Art Toppin of Plant 25, and Rhodes Copithorn and Bob Kennedy of Plant 35.

One of their practical ideas is to accept, and pass along, Christmas turkeys from Grumman families who perhaps have more than one. Fifty of these turkeys provided free lunches for children of Amityville working mothers last year.

An Engineering Christmas Fund flyer describes the amounts and circumstances of help given in 1969. Most of the families were recommended by Grummanites, but the help was given without disclosing the source of information. A typical thank-you: "Thanks to the Grumman Engineering Christmas Fund

I was able to buy my four children warm coats. I only hope that some day I will be able to help those in need." "It was like an angel of mercy came down and gave this gift."

To donate a Grumman Christmas turkey to a needy family, notify Personnel Records in Plant 35, via an AVO, by December 15. Or call Ardith Tepedino, Ext. 3587, or Dolores Voss, Ext. 7171.

Leo Senior of Product Support Administration, Plant 30, is cheerfully serving again this year as chairman of

the Product Support Department Fund. "Last year we helped 27 Grumman families who were in temporary financial straits because of illness or emergency situations," Senior said. "We collected and distributed \$2,700."

The Ex-Service Men's Club is collaborating with the Navy Office in providing toiletries and games for hospitalized service men. Pete Volpe of Inspection, Plant 2, is Ex-Service Men's Club commander and Gene Wilson of GDS Business Programs, Plant 30, is hospital chairman.

GAA announces plans for European flight

Does London, Zurich, or any of the other Old World cities strike a spark when you're thinking of what to do on next year's vacation? If they do, then GAA may have your ticket to a fun-filled holiday in Europe.

There will be a Pan Am 707 leaving Kennedy International Friday night, May 28, with stops at London and Zurich. The big jet will return to JFK on Saturday, June 19. The cost per person

(transportation only) will be \$185, and eligibility is limited to Grumman employees, their spouses, dependent children and parents of employees living in the same household. (An employee must accompany his family on trip.) Grumman retirees and their spouses are also eligible.

Sign-up is scheduled for January 20, Plant 28, 5:30 p.m. More details will be announced in a future Plane News.

plane GRUMMAN news

Published twice a month for the employees of Grumman Aerospace Corporation, Bethpage, N. Y. 11714, as a function of the Public Affairs Dept., Vice President J. B. Rettaliata, director.

Editor
Brian Masterson

Associate Editors
Claire Imrie
Al Wehren

Ads, Distribution
Dorothy Zeeb

Official Photographers
Presentations Services

Telephone
Plane News: 3293
Plane News from outside line:
LR 5-3293